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**PHOTOGRAPHIC
INTERPRETATION
REPORT**

**NATIONAL PHOTOGRAPHIC
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**ECONOMIC RECONSTRUCTION IN
BANGLADESH SINCE THE
DECEMBER 1971 WAR**

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ECONOMIC RECONSTRUCTION IN BANGLADESH SINCE THE DECEMBER 1971 WAR

ABSTRACT

1. This report describes the efforts and progress made in Bangladesh to repair the country's war-damaged economic facilities, including road and rail lines of communication, shipping lanes, and airfields. Also included is a discussion of the Soviet salvage and minesweeping operations at Chittagong. A discussion, map, summary table, and selected photographs are included for each topic.

INTRODUCTION

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BASIC DESCRIPTION

Overview

3. Damage within Bangladesh was extensive as a result of the 1971 civil war and the civil disturbances which preceded it. [] provided a second overall postwar look at the country. Damage resulting from the war had its greatest effect on the transportation networks. Airfields were bombed and many railroad and highway bridges were interdicted. Only the waterborne logistics routes remained relatively unobstructed.

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4. There are 18 airfields in Bangladesh. Fifteen of these suffered bomb damage. All but two of these have now been repaired giving the country 16 serviceable airfields (Figure 1 and Table 1).

5. Twenty-two major railroad bridges were interdicted. The railroads represent the primary means of overland transportation in Bangladesh, and repairs to the rail system have been rapid. Fifteen of the 22 destroyed bridges have been rebuilt. Of the seven bridges which have not been rebuilt, two are being bypassed by a rail-ferry system. Four of the bridges are located at extreme points within the country and have little effect on the overall system. The remaining bridge, though located in north-central Bangladesh, does not disrupt cross-country rail traffic.

6. Twenty-six major and numerous small highway bridges were interdicted. The highway systems are secondary to the railroads in importance, and the repair activity reflects this. Although repair was in evidence at many highway bridge sites, only four had been completed. For the most part fords or ferries were still in use as river crossings.

7. The seaport at Chittagong is the primary point of entry and exit for foreign trade in Bangladesh. Chalna, a river port, handles much of this trade for the southwestern part of the country. Shipping at these ports was severely hampered, both before and during the war, due to the sinking of merchant vessels in their harbors. Further disruptions were caused by Indian mining in the Bay of Bengal. After the war, the Soviet Union agreed to conduct salvage and minesweeping operations to clear these ports. It has since rescinded its offer to clear Chalna. No effort at salvage operations was discernible at Chalna, where at least three ships were observed partially submerged. Bids to clear this port have been opened to western countries. However, the river is navigable at least to Chalna, as 11 freighters were observed in the Mungla Anchorage. Repairs to the port facilities at Chalna have been made since January 1972. The Soviet presence was very much in evidence at Chittagong. Thirteen Soviet ships were in port and six more were conducting minesweeping operations in the Bay of Bengal []

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8. Widespread damage occurred to civilian dwellings before and during the civil war. This damage was particularly extensive in Dacca, where more than 4,200 dwellings were

destroyed. Many of these dwellings have since been reconstructed. This reconstruction activity was observed sporadically throughout the country.

9. Structural damage to the limited industrial and manufacturing facilities of Bangladesh appeared light. Major damage was discernible only at a thermal power plant, a machine tool plant, an ammunition load plant, and a jute mill. Damage at these plants has yet to be repaired. All other industrial facilities appeared essentially intact.

10. The military installations, like the industries in Bangladesh, suffered little apparent damage. Again there was little observed effort to make repairs.

Airfields

11. Damage from bombing or shelling during the 1971 civil war was evident at 15 of 18 airfields in Bangladesh. The damage was confined mostly to the runways and therefore rendered the airfields unserviceable. The regularity of spacing of the craters at Shibanj, Lalmanir Hat, Shamsharnagar, and Feni indicated probable use of cratering charges. In addition, Feni Airfield appeared to have been damaged by cross-runway bulldozer cuts (Figures 2 and 3).

12. By mid-February 1972 five of the damaged airfields had been repaired, including Dacca/Tezgaon, the country's principal airfield. [] the repair of all but two of the damaged airfields. Included among the repaired airfields was Dacca/Kurmitola, the capital's other major airfield (Figures 4 and 5). Only Shamshernagar and Kamrangir Char Airfields remain cratered and unserviceable (Figure 6). Three airfields, Sylhet, Tangail, and Rajshahi, were undamaged.

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Railroads

13. Railroad bridge destruction during the 1971 civil war virtually eliminated all through rail traffic in Bangladesh. Incomplete coverage in January and February 1972 revealed the interdiction of 20 bridges, 13 west of the Ganges and Jamuna Rivers and seven to the east.

14. Probably the most important rail line in Bangladesh is the Dacca/Chittagong line. This line is the only rail link between the country's major seaport at Chittagong and Dacca, the capital. Five major bridges on this line were interdicted. At the time [] one of the bridges had been bypassed by a temporary bridge and repair efforts were underway at two others.

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15. Photography [] covered all 20 of the bridges observed damaged on [] and two others in the previously unphotographed area of north-central Bangladesh. All but seven of these 22 bridges are now repaired, including four of the five on the vital Dacca/Chittagong line (Figure 7 and Table 2). The Fozilpur Railroad Bridge over the Muhari River is one of those repaired (Figures 8 and 9). The only bridge on this line not repaired was the Bhairab Bazar Railroad Bridge over the Maghna River (Figures 10 and 11). The dropped spans on this bridge had been removed and repair activity was apparent. The use of a rail-ferry system at this location completes the Dacca/Chittagong line. A similar rail-ferry system is in use at the still unrepaired Shra Railroad Bridge over the Ganges River. Repair of this bridge is nearly complete. No efforts to repair the remaining five rail bridges were observed. Four of these are located at extreme points within the country. The remaining Mymensing Railroad Bridge over Brahmaputra in north-central Bangladesh does not impede cross-country rail traffic (Figure 12).

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Highways

16. The already poor highway system in Bangladesh was disrupted by the interdiction of numerous bridges during the 1971 civil war. [] limited reconstruction of some major bridges which had been destroyed. Of the 12 destroyed major bridges observed [] four have been repaired (Figure 13 and Table 3). One of these is the Feni Highway Bridge over the Fenny River (Figures 14 and 15). After the bridge had been repaired, a temporary bridge was removed. Three of the remaining eight bridges were under repair and fords or ferries were in use at most water crossings where the bridge

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remained unserviceable. The Dacca-Comilla Highway Bridge, which had two of its four spans destroyed, was still not repaired (Figures 16 and 17). The downed spans have been removed and a new ferry system is in service.

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[redacted] an additional 14 damaged major bridges were observed. A bridge near Satkhira is an example (Figure 18). The bridges had not been repaired and an alternate system of fords or ferrys was in use.

Ports and Harbors

18. Ships sunk at Chalna and Chittagong before and during the civil war have hampered the use of these ports in Bangladesh (Figure 19). Navigation into the port of Chittagong was further disrupted by the use of mines in the Bay of Bengal.

19. In March 1972 the Soviet Union agreed to clear these ports for Bangladesh. The clearing and salvage operation was initially expected to take about three months. In July, however, this estimate was changed to 18 months. The Soviets have since rescinded their offer to clear Chalna and are concentrating their efforts on Chittagong. Bids for the salvage operations in Chalna have been opened to Western countries, including the US.

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[redacted] that the Soviets had secured a portion of the quay at Chittagong Port. Soviet ships were docked at the quay and at least 100 men were standing in formation within the fence-secured area. [redacted]

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[redacted] two VANYA (MSC), two Amur (AR), one Khobi (AOL), one Telnovsk (AKL), and one Mayak (SRTM) were docked at the quay (Figure 20). One Sura (ALBD), one Okhtenskiy (ATR), one Nyryat II (YDT), one Atlant (ATA), and two additional Mayak (SRTM) were also in port. The Nyryat II and the Okhtenskiy were salvaging a sunken oiler (Figure 21).

21. Twenty-two nautical miles southwest of Chittagong a Soviet minesweeping operation was underway in the Bay of Bengal. Six ships -- two Vanya (MSC) and four possible K-8 (MSB) -- were moving south in pairs. Each pair was towing a line with attached floats (Figure 22).

22. Coverage of Chalna Port revealed no indications of salvage operations in Mungla Anchorage. The Pursur River is navigable, however, as 11 freighters were anchored.

23. Much of the damage to the port facility has been repaired since January 1972. A large storage building, 15 warehouses, and approximately 200 civilian dwellings have been reconstructed (Figure 23).

24. The US supertanker S.S. Manhattan was observed at anchor near Kutubdia Island, 25 nm south of Chittagong Harbor (Figure 24). The water depth at the harbor entrance is approximately 30 feet. Since the 1,005-foot vessel has a draft of 70 feet when loaded, it can not enter the port.

25. Civilian housing in Bangladesh suffered widespread damage both during the civil war and the civil disturbances which preceded it. In Dacca alone more than 4,200 civilian dwellings were destroyed. At least 90 per cent of these dwellings in Dacca have been reconstructed (Figures 25-29). Similar reconstruction of civilian housing was observed sporadically throughout most of the country.

Industries

26. The industries in Bangladesh are numerous, but small and widely scattered. Primarily they consist of jute, flour and sugar mills, fertilizer and electric power plants, a cement plant, an ammunition loading plant, and a machine tool plant. External post war damage to these industries was light and [redacted] no appreciable change in status. A bombing run over the Jaydepur Machine Tool Plant caused damage to a large manufacturing building and a support building, (Figure 31). Two buildings in the inert components processing area of the adjacent Dacca Ammunition Loading Plant were also damaged (Figure 32). The Bheramara Thermal Power Plant Ganges Kobadak and a jute mill located at 23-49-25N 093-34-40E on the east bank of the Lakhya River received extensive structural damage. Little or no evidence of repair was discernible at any of these plants.

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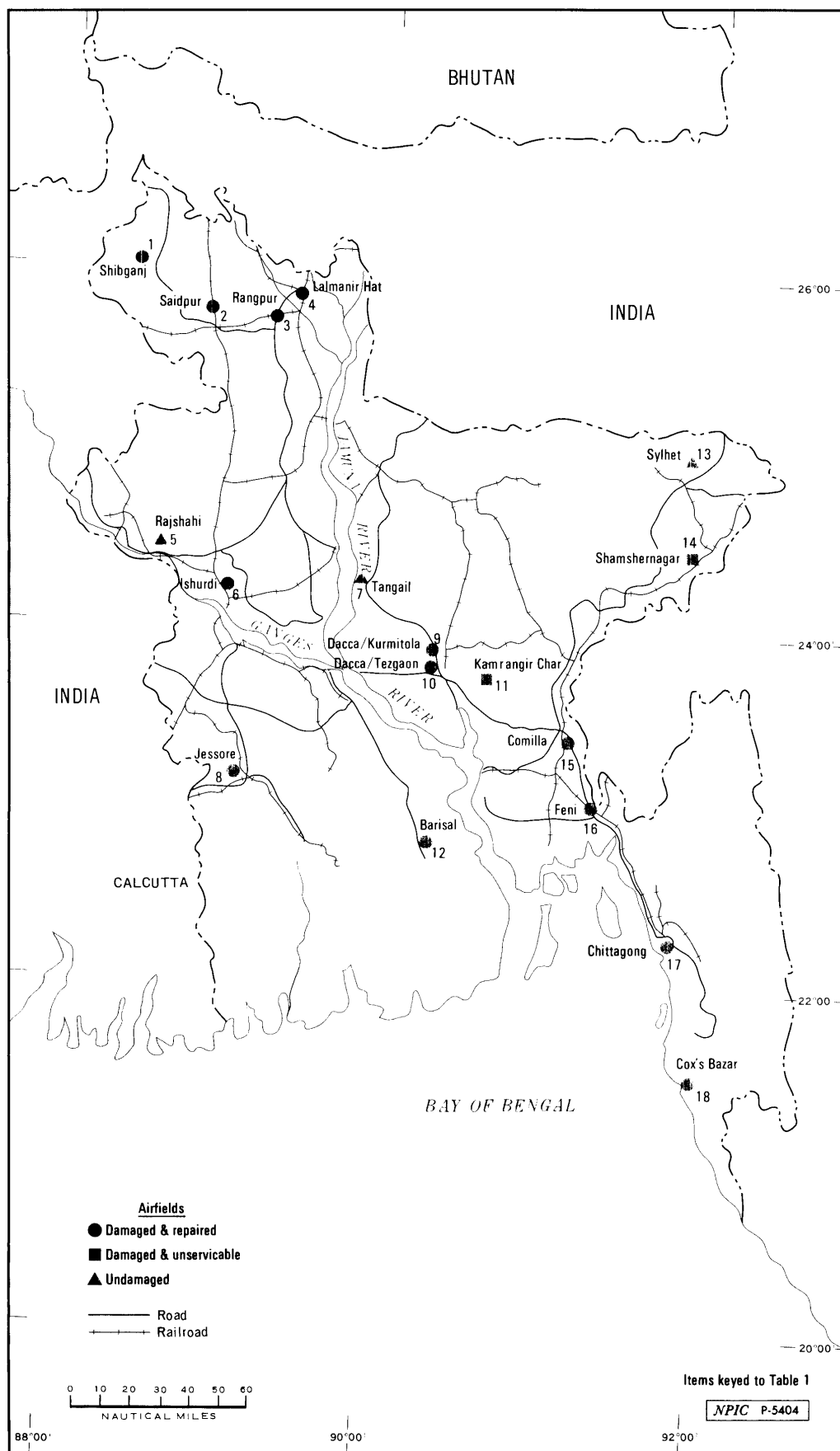


FIGURE 1. AIRFIELD STATUS, BANGLADESH

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Table 1. Air Facilities (Items Keyed to Figure 1)

Name	Coordinates	Status
Dacca/Kurmitola (9) (see Figures 4 & 5)	23-50-20N 090-24-03E	Repaired and serviceable
Dacca/Tezgaon (10)	23-46-45N 090-23-03E	Repaired and serviceable
Jessore (8)	23-10-52N 089-09-50E	Repaired and serviceable
Comilla (15)	23-26-15N 091-11-32E	Repaired and serviceable
Sylhet (13)	24-57-30N 091-52-38E	Undamaged
Shamshernagar (14)	24-23-40N 091-55-10E	14 craters on runway unserviceable
Feni (16) (see Figures 2 & 3)	23-02-05N 091-23-58E	Repaired and serviceable
Shibganj (1)	26-01-00N 088-24-10E	Repaired and serviceable
Lalmanir Hat (4)	25-53-20N 089-26-00E	Repaired and serviceable
Rajshahi (5)	24-26-35N 088-37-07E	Undamaged
Saidpur (2)	25-45-40N 088-54-30E	Repaired and serviceable
Rangpur (3)	25-44-55N 089-14-15E	Repaired and serviceable
Tangail (7)	24-13-35N 089-54-35E	Undamaged
Ishurdi (6)	24-09-10N 089-03-10E	Repaired and serviceable
Kamrangir Char (11) (see Figure 6)	23-47-30N 090-38-45E	6 bomb craters on runway - unserviceable
Barisal (12)	22-47-48N 090-18-15E	Repaired and serviceable
Chittagong (17)	22-15-27N 091-49-32E	Repaired and serviceable
Cox's Bazar (18)	21-27-00N 091-58-05E	Repaired and serviceable

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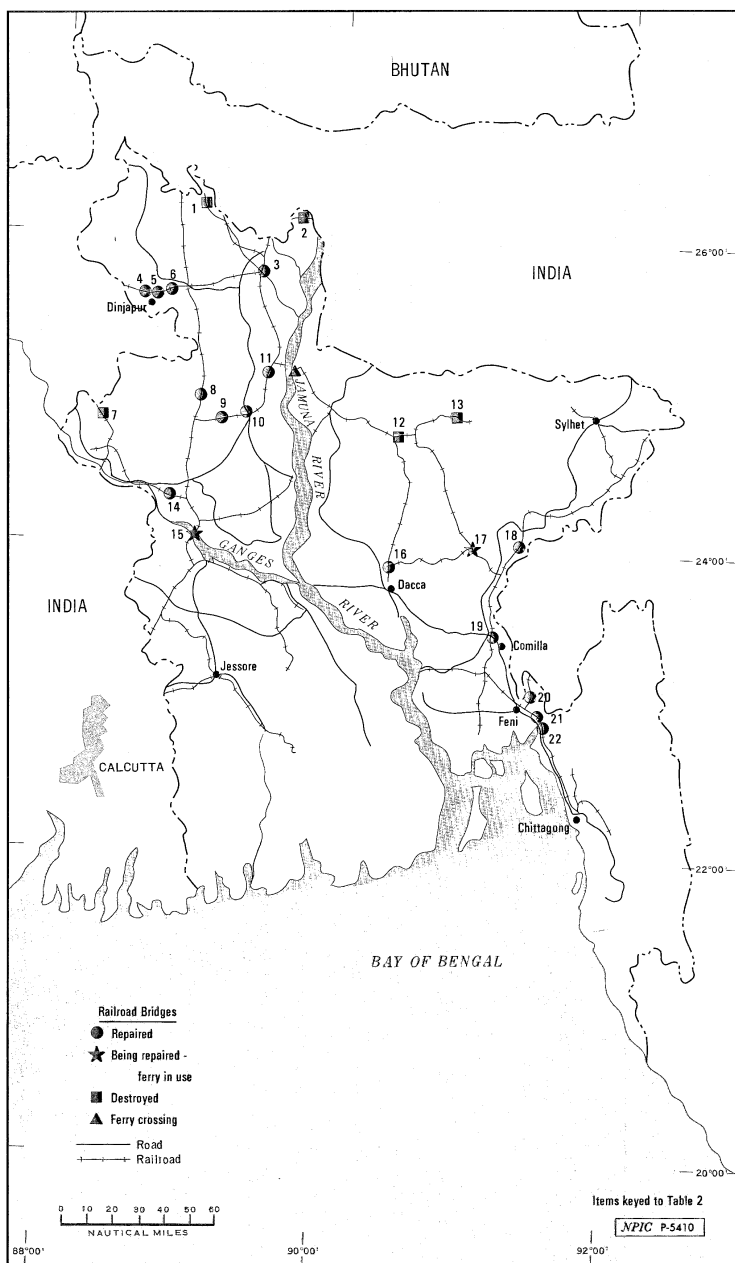


FIGURE 7. RAILROAD BRIDGE STATUS, BANGLADESH

Table 2. Railroad Bridges (Items Keyed to Figure 7)

Name	Coordinates	Status
Mahiganj, over Tista River (3)	25-47-30N 089-26-20E	Repaired and serviceable
Dinajpur, over Purnabhaha Dhao (4)	25-37-18N 088-37-25E	Repaired and serviceable
Dinajpur, over Atrai River (5)	25-36-48N 088-42-00E	Repaired and serviceable
Dinajpur East, over Kakrai River (6)	25-38-30N 088-45-55E	Repaired and serviceable
Akkelpur, over (8)	24-55-52N 089-00-59E	Repaired and serviceable
Vanuan River Tributary Talora, over (9)	24-49-24N 089-11-32E	Repaired and serviceable
Nagar River Bogna, over Karatoya (10)	24-51-02N 089-22-45E	Repaired and serviceable
Abdulpur West, over Barai River	24-17-23N 088-51-35E	Repaired and serviceable
Shra, over Ganges River (15)	24-04-05N 089-02-10E	Repairs nearing completion. Rail ferry in use
Dattapara, over (16)	23-52-54N 090-24-45E	Repaired and serviceable
Tungkhali (Duel) River Bhairab Bazar, over (17)	24-02-38N 090-59-50E	Repairs begun. Rail ferry in use
Meghna River (see Figures 10 x 11)		
Comilla, over (19)	23-29-04N 091-09-57E	Repaired and serviceable
Gumti River Fozilpur, over (21)	22-57-00N 091-30-15E	Repaired and serviceable
Muhari River (see Figures 8 & 9)		
Zararganj, over (22)	22-54-54N 091-31-48E	Repaired and serviceable
Fenny River Bochadaha, over (11)	25-06-42N 089-30-30E	Repaired and serviceable
Bangali River Nidrabad RR Bridge, (18) over stream	24-01-10N 091-18-50E	Repaired and serviceable
Bhurbaria RR Bridge, (20)	23-03-10N 091-25-40E	Repaired and serviceable
Selonai River Jamgram RR Bridge, (1) over stream	26-14-50N 089-05-30E	Entirely destroyed, unserviceable
Bhurungamari, over (2)	26-05-44N 089-43-20E	3 spans destroyed, unserviceable
Raidak River Rahanpur, over (7)	24-49-25N 088-19-10E	13 spans destroyed, unserviceable
Purnabhaha River Mymensingh, over (12)	24-44-32N 090-25-42E	4 spans destroyed, unserviceable
Brahmaputra (see Figure 12)		
Netrakona RR Bridge (13) over stream	24-54-40N 090-49-47E	1 span destroyed, unserviceable

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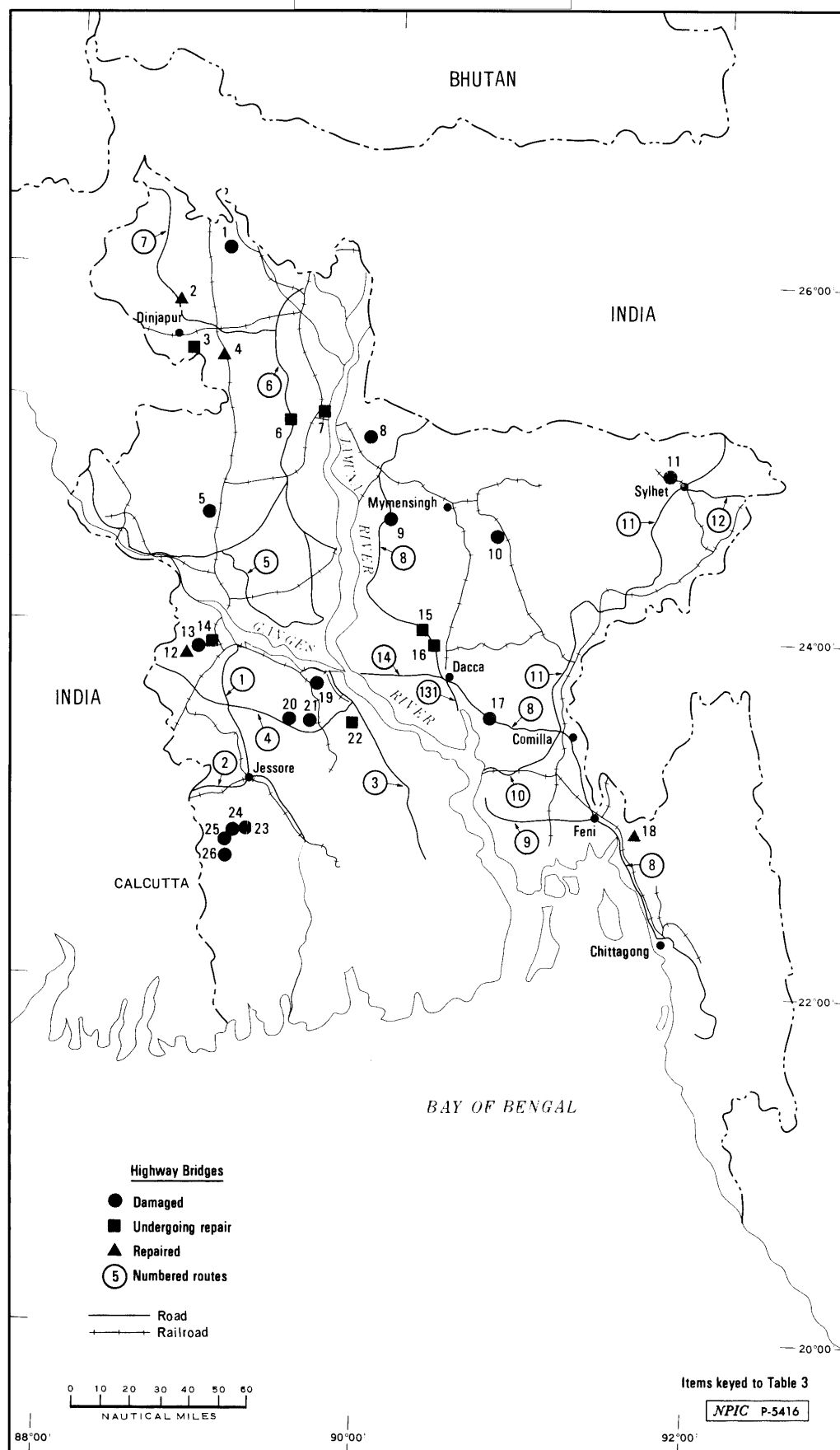


FIGURE 13. HIGHWAY BRIDGE STATUS, BANGLADESH

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Table 3. Highway Bridges (Items Keyed to Figure 13)

Name	Coordinates	Status
Dinajpur, over (2) Dhau River	25-48-40N 088-40-50E	Repaired and serviceable, by-pass bridge removed
Dinajpur, over (3) Kakrai River	25-32-20N 088-45-50E	Bridge in late stage of construction
Phurbari, over (4) stream	25-30-00N 088-57-20E	Repaired and serviceable
Attrai, over Gur River (5)	24-36-40N 088-58-20E	Abutment damaged, bridge intact, bridge not in use
Kushtia-Meherpur (12)	23-52-15N 088-47-20E	Repaired and serviceable
Kushtia-Meherpur, (13) over Matabhanga River	23-53-40N 088-52-30E	3 spans destroyed, bridge unserviceable, ford and ferry in use
Kushtia-Meherpur (14)	23-54-20N 088-55-35E	Bridge in late stage of reconstruction
Comilla-Dacca (17) (see Figures 16 & 17)	23-35-10N 090-38-20E	Dropped spans removed. New ferry in use
Sylhet-Kandgaor (11)	24-54-35N 091-44-00E	5 spans removed or destroyed, unserviceable
Kasimpur Highway (16) Bridge North, over Turag River	23-59-35N 090-21-10E	2 spans destroyed, unserviceable. New bridge in final stage of construction
Domar Highway Bridge (1) over Deonia Nadi	26-06-00N 088-46-40E	3 spans destroyed, unserviceable. Ford in use
Feni Highway Bridge (18) over Fenny River (see Figures 14 & 15)	22-57-15N 091-33-05E	Repaired and serviceable, by-pass removed
Faridpur Highway Bridge South (22)	23-32-40N 089-51-30E	Single dropped span replaced by temporary span, ferry also in use
Faridpur Highway Bridge West (19)	23-43-05N 089-36-20E	Six spans destroyed, unserviceable, ford flooded
Magura Highway Bridge (20)	23-30-00N 089-26-30E	Entire bridge is destroyed Temporary bridge south of original, two fords no longer used
Faridpur-Magura (21) Highway Bridge	23-31-50N 089-36-40E	Entire bridge destroyed. Four ferry crossings and a ford north of bridge site
Satkhira Highway (23) Bridge Northeast (see Figure 19)	22-45-00N 089-06-10E	One span destroyed, ferry in use
Satkhira Highway Bridge (24)	22-41-15N 089-02-40E	One span destroyed. By-pass bridge north of original
Satkhira Highway (25) Bridge Southwest	22-38-30N 088-59-25E	All 3 spans of bridge destroyed, foot bridge in use at site
Satkhira Highway (26) Bridge South-Southwest	22-35-00N 089-00-05E	All 5 spans destroyed, foot bridge in use at site
Rangpur-Bogra (6) Highway Bridge	25-10-15N 089-23-28E	Bridge in late stage reconstruction
Gaibanda Highway (7) Bridge South	25-14-25N 089-33-42E	Bridge under repairs
Mymensingh-Tangail (9) Highway Bridge	24-36-13N 090-01-15E	Bridge destroyed, by-pass bridge adjacent to it
Kalliakair Highway (8) Bridge West, over unknown stream	24-05-22N 090-09-10E	Bridge destroyed, by-pass bridge in final stage of constructon
Kishorganj Highway (10) Bridge North	24-31-50N 090-45-15E	Bridge destroyed, bypass in early stage of construction
Dacca Highway (15) Bridge Northeast	23-54-10N 090-14-00E	Bridge destroyed. Ferry in use. Repairing abutments

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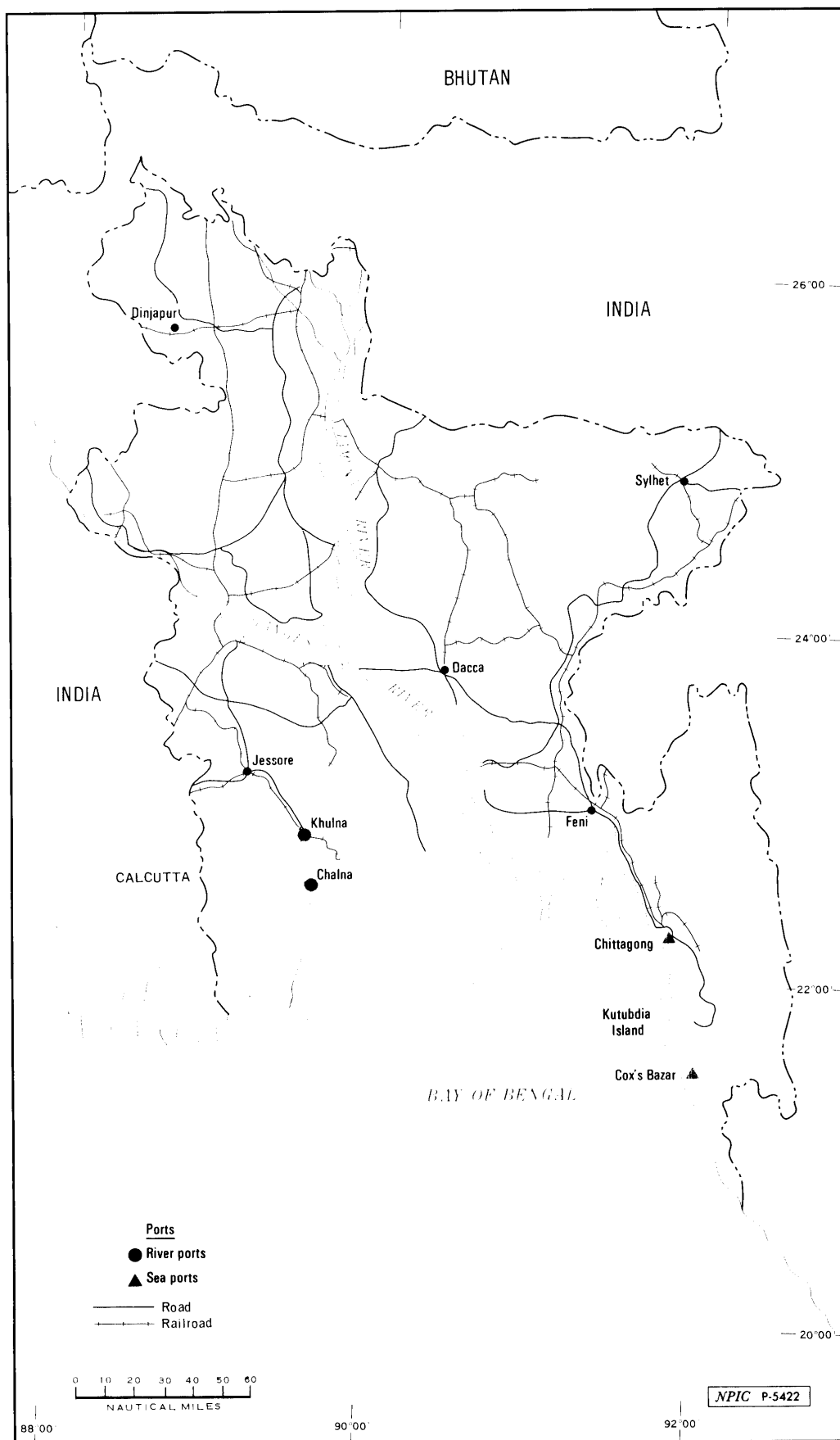


FIGURE 19. PORT FACILITIES, BANGLADESH

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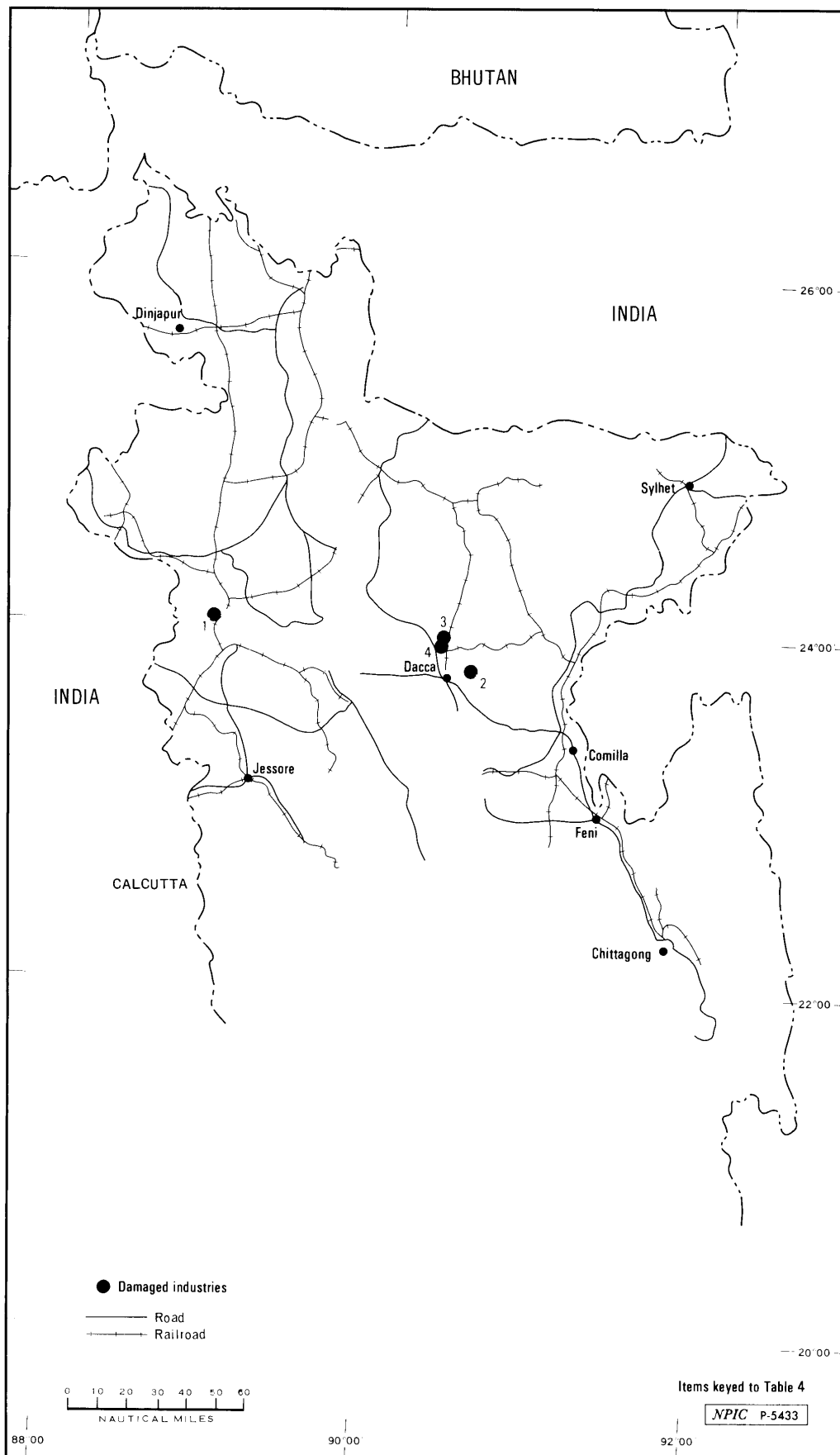


FIGURE 30. INDUSTRIAL STATUS, BANGLADESH

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Table 4. Industries (Items Keyed to Figure 30)

Name	Coordinates	Status
Beheramara (1) Thermal Power Plant Ganges Kobadak	24-02-48N 089-02-00E	One large plant building badly damaged
Jute Mill (2)	23-49-25N 093-34-40E	Four buildings badly damaged
Dacca Ammunition Loading (3) Plant (see Figure 31)	23-53-15N 090-24-35E	Two buildings in inert components processing area damaged
Jaydepur (4) Machine Tool Plant (see Figure 32)	23-52-50N 090-24-05E	One large manu- facturing building and one support building damaged

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REFERENCES

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MAPS AND CHARTS

Series 1501 JOG-G, Sheets NF45-46 & NG45-46, scale 1:250,000

USAF Joint Navigational Chart, JNC-37, scale 1:2,000,000

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